

- 23 -

**ABSTRACT OF THE DISCLOSURE**

The present invention provides a controllable double cladding guiding structure for tunable phase delay, dynamic chromatic dispersion and polarization mode dispersion compensation. The device includes an etched fiber, an electro-optic material with index of refraction changing with externally applied stimulus (electric, magnetic or thermal effect) and a fiber Bragg grating (uniform, apodized, linearly or non-linearly chirped).